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An electrical welding machine controlled by the digital current

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Abstract

The traditional electrical welding machine has several disadvantages. For example, the efficiency of its transformer is not high, its volume weight is too much, and its output current cannot be controlled well. This paper proposes an electrical welding machine controlled by the digital current. It uses the technique of switching power supply and one chip microprocessor to control the output current. At last, the results show that this electrical welding machine's maximum average output current is 70A, its maximum average output power is 2.1KW, and the efficiency can attain 90%. In addition, the results indicate that the microprocessor can be used to more accurately control the quantity of the output current. After the practical test and verification, this system can be applied in electrical welding processing. Compared with the traditional electrical welding machine, this machine, which has been mended and improved, has the advantages of being light and being highly efficient.

Key words：Electrical Welding Machine;Microprocessor